

Effect of exogenous emulsifier on growth performance, fat digestibility, apparent metabolisable energy in broiler chickens

ABSTRACT

This research was done to evaluate the effect of a commercial exogenous emulsifier (polyethylene glycol ricinoleate (PEGR)) with high hydrophilic-to-lipophilic balance (HLB) supplementation to broiler chicken diets on growth performance, digestibility of fat and apparent metabolisable energy (AME) content in week 1, 3 and 5. A total of 360 one-day-old male Cobb broiler chicks were assigned in groups of 30 to 12 battery cages. The chicks were randomly assigned to two dietary treatments, with 6 replicate cages per treatment. The diets were either standard broiler starter and finisher, with rice bran oil (RBO) as supplemented fat source or similar diets + 0.05% emulsifier (RBOV). Feed intakes of RBOV groups significantly increased compared to those of RBO groups from week 2 till 4 while body weights of RBOV diets significantly increased in week 4 and 5. Both RBOV and RBO groups had similar FCR except for week 5. Addition of this strongly hydrophilic emulsifier showed no significant difference in fat digestibility of both RC and RV groups but higher AME was noted for the treatment than for the control groups at week 5. Therefore, supplementing the exogenous emulsifier into a broiler diet enriched with rice bran oil improved body weight and AME content at week 5 with minimal effect on fat digestibility.

Keyword: Emulsifier; Performance; Digestibility; Broilers